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GOVERNMENT OF INDIA
TARIFF COMMISSION

REPORT

ON

The Continuance of Protection to the Soda Ash Industry

BOMBAY, 1964

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Report on the Continuance of
Protection to the Soda Ash
Industry—1964.

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Errata List to the Report on the Continuance of Protection to the Soda Ash Industry, (1964).

1. Page 26, Para 13, under "Heavy Soda Ash" against 6, *for* "5.6" *read* "5.66".

2. Page 33, Appendix I, under "A. Producers" against Sl. No. 1,

   (i) after the name and address of the unit *read* "(Factory at Mithapur)".

   (ii) under the same heading against Sl. No. 2, after the name and address of the unit *read* "(Factory at Dhrangadhra)".

   (iii) under the same heading, against Sl. No. 4, after the name and address of the unit *read* "(Factory at Varanasi)".

3. Page 34, Appendix I, (iv) under "C. Consumers" against Sl. No. 32, *for* "Copper" *read* "Couper".

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1—13 T. C. Bom./64

GOVERNMENT OF INDIA

MINISTRY OF COMMERCE

New Delhi, the 14*th December* 1964.

RESOLUTION

TARIFFS

No. 10(3)-*Tar*/64.—The Tariff Commission has submitted its Report on the continuance of protection to the Soda Ash Industry on the basis of an inquiry undertaken by it under sections 11(e) and 13 of the Tariff Commission Act, 1951. Its recommendations are as follows :—

(1) Protection to the soda ash industry should be continued for a further period of three years from 1st January 1965 to 31st December, 1967 and the existing rates of protective duties, namely, Rs. 11.32 per quintal (Standard) and Rs. 8.37 per quintal (Preferential) exclusive of the additional import duty and the countervailing excise duty, should remain in force.

(2) If the railways could accept some alternative protective measures for the wagons carrying salt and enable soda ash manufacturers to avail themselves of the rate under classification 35-A of the Goods Tariff, it would help considerably a basic industry like the manufacture of soda ash.

(3) Rationalisation of the railway freight structure, taking into consideration the necessity for the development of a basic chemical industry like the production of soda ash, might mitigate the hardship of the industry by reducing the incidence of Transport cost on its operations.

(4) The railway freight structure in respect of limestone used by the chemical industries may be reviewed from the fresh angle of approach.

(5) The railway authorities should re-examine the issue of allowing Station-to-station freight rates for the transport of limestone required by manufacturers of soda ash.

(6) Conservation of mineral resources is a very important aspect of planning and economic development and, therefore, a more discriminating use of limestone should be enforced under the supervision of a suitable authority.

(7) So long as B. P. hard coke is an important raw material for modified Salvay Process which has been permitted in the case of Sahu Chemicals it would only be fair if the allotment of coke is made according to quality needed to the various producers of soda ash keeping in view their special requirements.

(8) Any facile assumption that self-sufficiency has already been reached in respect of soda ash production in the country is untenable. There is not only the need for the existing producers to make up the lee-way and expand further, if possible, but also there is necessity for at least one or two more new units to go into production as early as possible.

(9) Any further development of the soda ash industry in the Eastern and Southern regions of the country may have to adopt the modified Solvay process to obviate the necessity of obtaining limestone from long distance for which there is a large competing demand.

(10) A reorganisation of the soda ash industry to achieve sizable economies in production should be a matter for earnest consideration by the industry.

(11) Decontrol of prices should not have been construed by the manufacturers of soda ash as an occasion for making substantial price changes. A certain amount of self-restraint on the part of producers in a protected industry is called for with regard to their price policy and this is very necessary in the interests of national development.

2. Government have given careful consideration to these recommendations but having regard to the progress the industry has made so far and the fact that in the present circumstances there is no likelihood of any unhealthy competition from imports, Government consider that tariff protection to Soda Ash industry need not be continued beyond 31-12-1964.

Government, however, propose to continue, for the time being, the rate of duty as at present. Necessary legislation to implement Government's decision will be undertaken in due course.

3. Government have taken note of recommendations (2) to (7) and necessary action will be taken to the extent possible.

4. Attention of the Soda Ash Industry and Manufacturers of Soda Ash is drawn to recommendations (7) to (11).

ORDER

ORDERED that the Resolution be published in *the Gazette of India* and a copy thereof be communicated to all concerned.

D. N. BANERJEE,

Joint Secretary to the Government of India.

REPORT ON THE CONTINUANCE OF PROTECTION TO THE SODA ASH INDUSTRY

Previous tariff inquiries.

1. This tariff inquiry into the soda ash industry is sixth in the series, protection having been first granted to the industry in 1949. Our last inquiry was held in 1961 and we recommended continuance of protection to the industry till December 1964 at the then existing rates of protective duty of Rs. 8.37 per quintal (preferential) and Rs. 11.32 per quintal (standard), excluding the usual countervailing duty leviable on the item. This was given effect to by the Indian Tariff (Amendment) Act, 1961. An additional customs duty of 10 per cent of the duty is also leviable with effect from 1st March 1963 under the Finance Act.

Present inquiry.

2. As protection granted to the industry is scheduled to expire on 31st December 1964, the present inquiry has been undertaken under Section 11(e) read with Section 13 of the Tariff Commission Act, 1951, which empowers the Commission to inquire into and report on any further action required in relation to protection to an industry. In the light of decontrol of prices of soda ash with effect from 16th December 1963, the scope of the inquiry is confined only to the aspects of protection.

3. Method of inquiry.

3.1. A press note was issued on 4th February, 1964 inviting firms, persons and associations interested in the inquiry as producers, importers or consumers of soda ash to obtain copies of the relevant questionnaire from the Secretary, Tariff Commission and furnish their replies thereto. Questionnaires were also issued to producers, importers and consumers of soda ash. The Director General of Technical Development (hereafter referred to as D.G.T.D.) was requested to give a detailed memorandum on the industry describing the progress made by it since our last inquiry in 1961. The Textile Commissioner was requested to indicate the requirements of soda ash for the textile industry and to offer his views on the quality of the domestic product. The Director, Indian Standards Institution, was asked to indicate whether the standard specification for soda ash IS: 251-1950 has been further amended. The Director General of Supplies and Disposals was requested to furnish data regarding purchases of soda ash by Government and to say whether the prices and quality of the indigenous product were satisfactory. The State Trading Corporation of India Ltd., which has been importing soda ash, was asked to give details regarding distribution, c.i.f. prices and selling prices of the product. Information was also sought from the Central Board of Revenue for Customs and Central Excises and from the Railway Board and Hindustan Salts Ltd., about the latest position regarding implementation of certain recommendations made in our last

Report pertaining to their respective organisations. The Directors of Industries of the States where soda ash units are located were requested to furnish details of such units located in their States. The Indian Chemical Manufacturers' Association, Calcutta, and the Alkali Manufacturers' Association of India, Bombay, who represent producers were called upon to furnish information on aspects of the case in which they are interested. Similarly the associations representing the interests of consumers were also requested to offer their views. The Collectors of Customs at the main sea ports of the country were requested to furnish c.i.f. prices of latest imports of soda ash. A list of persons to whom the Commission's questionnaires and letters were issued, indicating those who replied to the same, is given in Appendix I.

3.2. Members of the Commission and other officers visited the factories of some of the producers of soda ash in the country. Details of their visits are given in Appendix II. For ascertaining the costs of production of soda ash three of the four existing factories were selected for investigation. Tata Chemicals Ltd., Mithapur, being the biggest producer was obviously one amongst them. The other selected units were new ones, namely, Saurashtra Chemicals, Porbandar and Sahu Chemicals and Fertilisers, Varanasi.

3.3. A public inquiry into the soda ash industry was held at Bombay on 21st May 1964. Representatives of Sahu Chemicals and Fertilisers met us on 20th May and the representatives of Tata Chemicals and Saurashtra Chemicals on 22nd May to discuss their respective costs of production. A list of persons who attended the public inquiry is given in Appendix III.

4. Implementation of recommendations made in our last Report (1961) on matters other than tariffs.

4.1. We had recommended in our last report that:—

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> "It is not desirable to levy excise duty on that part of soda ash production which is used for self-consumption as raw material for brine purification."

The then Ministry of Commerce and Industry informed us that the Central Board of Revenue had already exempted from excise duty soda ash upto 2 per cent on the quantity of common salt put into process for purification of brine and that further raising of the exemption limit was under consideration. Subsequently, the Central Board of Revenue has decided that the quantities of soda ash to be issued duty free for use within the factory be raised from 2 per cent to 3 per cent.

4.2. "For encouraging the use of alternative fuels like furnace oil particularly in areas in Southern and Western India to which coal movements by rail are becoming increasingly difficult, Government may review the impact of excise duty on such oil."

The then Ministry of Commerce and Industry informed us that this recommendation was receiving attention in the context of a general policy for encouraging the use of furnace oil in lieu of coal in selected industries. However, the D.G.T.D. has now stated that this proposal has not met with a favourable response.

> 4.3. "The question of providing for a higher depreciation or a rehabilitation allowance for cost determination purposes in respect of soda ash and similar chemical industries on account of the corrosive nature of the materials used should be examined further by Government as this is a general issue."

The then Ministry of Commerce and Industry called for details from producers of soda ash regarding the type of machinery used and the rate of wear and tear on them for examining the recommendation made by us. Since 1962 there has been an increase in the rate of depreciation allowance from 15 per cent to 22½ per cent for two-shift working in the case of highly corrosive chemical plants. In the current year's budget a further 7½ per cent allowance is permitted for third shift operation.

> 4.4. "If a consumer undertakes to carry out protective measures for wagons used as required by the Railways, the higher freight rate for bulk salt should not be enforced."

The Ministry of Railways has said with reference to this recommendation that the Railways did not charge higher freight rates for movement of salt in bulk. It has also stated that the transport of salt in bulk is being tried out. This is further discussed under raw materials in paragraph 7.1.1.2.

> 4.5. "The Railway Administration should, in consultation with soda ash manufacturers, evolve a workable arrangement for bulk movement of salt in open wagons and extend the facilities to cover long distance movement of salt also."

As indicated earlier, this recommendation seems to be still under consideration of the Railways as the transport of salt in bulk is at present in an experimental stage. It is, however, understood that it is being done at present only on the Western Railway and the Development Council for Alkalies and Allied Industries has recommended its adoption by the other regional railways.

> 4.6. "The alleged anomaly in freight rates on ammonium chloride which, though actually a fertiliser, is not charged at the lower rate for fertilisers when supplied to industrial consumers, may be considered by the Railway Administration for suitable action."

The Railway Board has now stated that it has not been able to find sufficient justification for making a general reduction in the rates of ammonium chloride meant for soda ash factories to the level of rates applicable to ammonium sulphate which has been assessed to a lower rate in view of its main use as a fertiliser. It has, however, no objection to consider the request for special rates between specific points if it is established that the traffic is not able to bear the normal rates.

4.7. "Government should adopt a flexible policy as regards licensing of additional capacity for soda ash."

What we meant by the above was that licensing of new units in the industry in preference to expansion of existing units may as far as possible be avoided. The then Ministry of Commerce and Industry had informed us that Government had taken note of this recommendation in respect of licensing of further capacities. The D.G.T.D. has explained that all applications for expansion have been licensed. In fact all such licensees have not been able to expand immediately and some have even requested revocation of the licences issued to them for expansion.

4.8. "In the interest of development of the soda ash industry in an area which possesses natural advantages, the Government of Gujarat should sympathetically consider lifting or reducing the sales tax on steam purchased by Saurashtra Chemicals from the Gujarat Electricity Board."

We are now informed that the rate of sales tax has been reduced from 5 per cent to 2 per cent.

4.9. "Hindustan Salt Co., should take speedy steps to implement its schemes for installing necessary equipment for bulk handling of salt."

Hindustan Salts Ltd., has now informed us that it proposes to install in the first instance one mobile belt conveyor for bulk movement of salt at its works at Sambhar lake. The company has, however, regretted that it has not been able to make much headway in regard to bulk handling of salt at Sambhar Salt Works.

5. Present position of the Industry.

5.1. *Units in the industry.*

5.1.1. In 1961 there were four units in production and a fifth one was licensed for production. Those that were in production were Tata Chemicals Ltd., Mithapur, and Dhrangadhra Chemical Works Ltd., Dhrangadhra, which were old units and two newly established units, Saurashtra Chemicals, Porbandar and Sahu Chemicals and Fertilisers, Varanasi. The fifth one licensed to Khan Bahadur H.M.D.H. Bhiwandiwalla & Co., Bombay has not come into production yet and its licence has been recommended to be revoked. The number of units in production continues to be four at present.

5.1.2. *Tata Chemicals Ltd., Mithapur.*—This concern is a public limited company engaged in the production of a variety of chemicals such as heavy chemicals, marine chemicals, agro-chemicals and some pharmaceuticals. However, soda ash and caustic soda are the major heavy chemicals produced by it, the installed capacity for soda ash being 400 tonnes per day. A new feature of its activities has been the production of heavy soda ash since 1961. After trial runs it was able to produce 13,940 tonnes in 1962 and 28,203 tonnes in 1963. Tata Chemicals has under consideration further schemes of expansion of its soda ash plant which have, however, not been licensed yet. Tata Industries Private Ltd., Bombay continue to be the Managing Agents of this company and are entitled to a commission of 10 per cent on net profits. The authorised capital of the company continues to be Rs. 10 crores while the issued and paid-up capital as on 30th June 1963 was Rs. 362.34 lakhs. Dividends paid by the company on ordinary shares during the years 1960-61, 1961-62 and 1962-63 were 6.5 per cent, 6.5 per cent and 10 per cent respectively. The company employs 382 workers and has a technical staff of 159 persons.

5.1.3. *Dhrangadhra Chemical Works Ltd., Dhrangadhra.*—This is a public limited company engaged in the manufacture of soda ash in its factory at Dhrangadhra and of caustic soda in its factory at Sahupuram near Tuticorin in South India. It does not produce heavy soda ash and has no scheme of undertaking its production in the near future. Sahu Brothers (Saurashtra) Private Ltd., Dhrangadhra, continue to be the Managing Agents of this firm and are entitled to a commission of 10 per cent on net profits. The authorised capital of the firm is Rs. 3 crores and subscribed and paid-up capital as on 31st March 1963 was Rs. 167.50 lakhs. Out of this a sum of Rs. 21.50 lakhs is allocated for the soda ash unit and the balance of Rs. 146 lakhs is estimated as capital investment for the caustic soda unit. The company paid dividend on ordinary shares at 6 per cent during 1960-61 and 1961-62 and 8 per cent in 1962-63. The company employs 1,143 workers and 115 technical persons.

5.1.4. *Saurashtra Chemicals, Porbandar.*—This unit is a Division of Jiyajeerao Cotton Mills Ltd., Gwalior, whose Managing Agents are Birla Gwalior Private Ltd. This unit manufactures both soda ash and caustic soda and adopts the chemical process for the production of caustic soda. Though installation of a heavy soda ash plant having a daily capacity of 50 tonnes has been completed it has not yet gone into full production owing to initial working problems. Saurashtra Chemicals has plans to expand its soda ash production from 200 tonnes to 400 tonnes per day. This expansion plan is expected to be completed in two stages of 100 tonnes each by the end of 1964 and 1965 respectively. The company employs 702 workers and 79 technical personnel.

5.1.5. *Sahu Chemicals and Fertilizers, Varanasi.*—This concern is a Division of New Central Jute Mills Co. Ltd., Calcutta and its Managing Agents are Sahu Jain Ltd. A special feature of its production is the adoption of modified Solvay process in which ammonium chloride, a fertiliser, is a joint product of soda ash. This unit was originally designed to produce heavy soda ash but the variety of soda ash that is now manufactured by it is of a type which happens to be mid-way between light and heavy, having a density ranging from 39 to 43 lbs. per c. ft. However, as this is heavier than the light soda ash, it is preferred by the bangle industry, particularly in Ferozabad. The bangle industry was using a mixture in equal proportion of light soda ash obtained locally and imported heavy soda ash, which is now being replaced by the adoption of the soda ash produced by Sahu Chemicals dispensing thereby with the imports of heavy soda ash. This development, however, seems to have acted as a disincentive to the firm to go in for the production of heavy soda ash for which its processing costs would be very high and it does not seem to have any plans for its production. The company employs 1,048 workers and has technical staff of 182 persons.

5.2. *Structure and organisation of the industry.*

5.2.1. *Location.*—The location of the industry is not ideal from all standpoints. There is a concentration of it in the Western region as three out of the four units are situated in the Gujarat State. Such concentration suffers from certain disadvantages such as distance from fuel sources and the difficulty of catering to the widely diffused consumption centres. Coal and coke have to be brought either by rail or by sea from long distances adding thereby to their costs considerably. Catering to the consumption centres in the Eastern and Southern regions of the country is also becoming expensive as freight is a big item in the marketing of the product. But this is to some extent compensated by the easy access of manufacturing centres to limestone reserves which are found to exist largely in the Western region. The manufacturing units in that region due to favourable climatic conditions have also the facility of making salt which is a very important raw material. The fourth unit, namely, Sahu Chemicals and Fertilizers which is located in Varanasi has the advantage of being in the midst of the glass industry which is essentially concentrated in the Eastern region and is an important consumer of soda ash. It is not however, in need of limestone as it has adopted the modified Solvay process where limestone is not an ingredient. This concern has also the advantage of being nearer to the sources of coal and coke but these favourable circumstances seem to be largely neutralised by the difficulty of obtaining salt which is a primary raw material for the industry. It has no facilities for producing salt in its vicinity and it has, therefore, to purchase it from the Hindustan Salts Ltd. Apart from the incidence of its cost on its production there are certain transport difficulties owing to change of gauge on the railways involving transhipment from broad gauge to meter gauge system. There seems to be no way of overcoming these difficulties after having made its initial choice of location. The incidence of these unfavourable factors on its cost of production is not likely to be mitigated unless it is compensated by further economies in conversion cost and an improvement in the offtake and price of ammonium chloride which is a joint product.

5.2.2. This pattern of location of the industry highlights the need for new units to be started in the Eastern and Southern regions of the country and for units which will have diversified production processes. There is now prospect of a new unit coming up in the Madras State under the management of Parry & Co., which proposes to adopt the modified Solvay process as limestone deposits are not available in nearby areas. Any further development of the industry in the Eastern and Southern regions may have to adopt this process to obviate the necessity of obtaining limestone from long distances for which there is a large competing demand.

5.2.2.1. One of the disquieting features of this industry has been its high cost structure. Its future prospects will depend upon successfully overcoming this difficulty. Among the various factors which contribute to a reduction of cost of production the most important is the size of units engaged in the production of soda ash. The D.G.T.D. considers that an economic unit should have a production capacity of 400 tonnes daily which would involve an investment of Rs. 5 crores. Though such a unit cannot be considered to be of optimum size under all circumstances at present it seems to be the minimum to yield favourable results. Any unit of a lesser size is likely to have certain techno-economic weakness manifesting itself in higher cost of production. Plant size has an impact on capital investment and production costs. The larger a plant the lower would be the investment per unit of production. Overhead expenses would also get proportionately reduced with an increase in the size of the production unit. Among the existing units barring one, others seem to be of a size which is even lower than the optimum thus defined. In foreign countries units producing soda ash are many times larger than an economic unit having 400 tonnes daily capacity suggested as suitable for our country.

5.2.2.2. Apart from the size of the manufacturing units there are also a few other factors which contribute to the high cost of production of soda ash in India. Salt which is one of the very important raw materials in the industry is an expensive item in this country. Unlike in several Western countries where an underground strata of salt is wet-mined at low cost, in India salt is obtained by solar evaporation, followed by manual processes involving considerable expenditure. It is also subjected to uncertainty of weather. Limestone which is the other important raw material in the standard Solvay process is also found to be less dense in certain areas involving higher processing costs in our country. The coke available for the industry has a high ash content enhancing the conversion cost. It is also stated that to dissipate the process heat, only sea water having a higher temperature is available on most locations. None of these factors seem to be within human control. In the manufacture of salt marginal economies may be effected by improvements in the organisation for production. The quality of the limestone must however be taken as a given factor unless better deposits are found. So far as coke is concerned its high ash content has been a liability in other industries also.

5.2.3. The industry has had to meet very heavy transport costs in acquiring its raw material and in marketing its products. It is estimated that these two together form about 20 per cent of the selling price of soda ash. Owing to the non-availability of facilities for bulk movement of soda ash packing has become another important item of expense for this industry, forming about 5 per cent of the selling price of soda ash. A more favourable adjustment of transport cost is not beyond human control. Rationalisation of the freight structure, taking into consideration the necessity for the development of a basic chemical industry like the production of soda ash, might mitigate the hardship of the industry by reducing the incidence of transport cost on its operations.

5.2.4. The industry also suffers from certain difficulties in its organisation. Owing to the deficiency of ancillary industries it has to make for itself all the components and tools unlike in Western countries. In spite of its being established for many years the industry has been unable to benefit by such external economies. In this situation it is gratifying to note that Tata Chemicals is fabricating certain components in its well developed foundry for the other units as well. This is a development in the right direction and needs to be pursued further. Another external economy normally available to production units is the availability of power at reasonable price. Unfortunately power costs are high in our country and there is also variation in rates from State to State. If only the rates could be lowered and made uniform throughout the country, it would be a great advantage not only to the chemical industry but also to other industries that are large consumers of power.

5.2.5. However, a few techno-economic possibilities for reduction of costs of production have been mentioned, which are worth exploration. It is suggested that a reduction in fuel consumption would be possible if dry lime is substituted for milk of lime. It is also stated that the distiller waste, which is obtained after distillation of ammonia could be utilised for the recovery of valuable marine products. Finally, it has been stressed by the industry that there ought to be an integration of chemical operations for a reduction of cost of production and conservation of man-power. It is said that encouragement for setting up of small units is not in the best interest of the industry. Any chemical complex ought to be of a large size if all the economies of scale in production should accrue to it. We are of opinion that a reorganisation of the industry to achieve sizable economies in production should be a matter for earnest consideration. Since basic chemicals like soda ash are raw materials for other chemical processes, unless their costs are kept at their minimum, they would affect adversely the costs of the other chemicals dependent on them. The successful implementation of export policy also very much depends upon the reorganisation of the industry on the lines suggested.

5.3. *Capacity.*

5.3.1. Tata Chemicals had in 1961 an installed capacity of 300 tonnes per day or 110,000 tonnes per year. The unit has now reported that it has increased the capacity to 400 tonnes per day or 146,000 tonnes per year with effect from 1st July 1962. It can produce out of its output 80 tonnes of heavy soda ash per day. If the rated capacity making allowance for maintenance and repairs is taken at 90 per cent, its annual rated capacity may be taken at 132,000 tonnes per annum. It was agreed at the public inquiry that its rated capacity could be taken at 90 per cent of its installed capacity.

5.3.2. The installed capacity of Dhrangadhra Chemical Works was adopted in 1961 at 130 tonnes per day or 48,000 tonnes per annum. At the public inquiry the representative of the company requested that the rated capacity of the unit may be calculated on the basis of 85 per cent of the installed capacity as at the time of the previous inquiry, that is, 41,000 tonnes per annum. The D.G.T.D. has stated that at the request of the firm the development licence granted to it for the production of 36,000 tonnes of soda ash from caustic soda at its Tuticorin factory was revoked in view of technical difficulties and the prevailing large demand for caustic soda.

5.3.3. At the time of the last inquiry the installed capacity of Saurashtra Chemicals was 200 tonnes per day or 73,000 tonnes per annum. The company had been issued a licence to double its output to 400 tonnes per day which it expects to achieve in two stages of 100 tonnes each, reaching a capacity of 400 tonnes per day by the end of 1965. The D.G.T.D. has stated that orders for necessary machinery have been placed. Thus the units' installed capacity at present is slightly higher than 200 tonnes but has not reached fully its first stage of expansion to 300 tonnes. Its present installed capacity has been given as 73,000 tonnes and its annual rated capacity as 67,000 tonnes. Assuming the anticipated increase in capacity its daily capacity may be taken at 300 tonnes during 1965 and 400 tonnes during the two subsequent years. The installed capacity on this basis would be 109,500 tonnes per year in 1965. For 1966-67 it will be 146,000 tonnes per annum. The average for the 3 years 1965 to 1967 will be 133,833 tonnes. Calculating on the basis of 90 per cent of installed capacity as agreed to by the representative of the company at the public inquiry its rated capacity would be 120,500 tonnes per annum.

5.3.4. Sahu Chemicals had a daily installed capacity of 120 tonnes or an annual capacity of 44,000 tonnes at the time of the last inquiry. A licence was issued to it to double its capacity to 240 tonnes per day, which included 50 tonnes of heavy soda ash. The unit has not been able to increase its capacity which, therefore, stands at 120 tonnes per day, or 44,000 tonnes of installed capacity per year. Due to some deficiencies and imbalance in the plant to rectify which more capital equipment is needed its rated capacity has not been reached. The representatives of the company requested that the rated capacity may be taken at 85 per cent. Its rated capacity may, therefore, be estimated at 37,400 tonnes during the ensuing three years period.

5.3.5. The aggregate installed capacity for soda ash in the country from the four units would be 950 tonnes till the end of 1965 and 1050 tonnes per day during 1966-67. Since the new unit licensed in Madras State having an installed capacity of 200 tonnes is not likely to go into production during the next three years it is not being included for the assessment of installed capacity.

5.4. *Production.*

5.4.1. The statement given below shows the present annual rated capacities and production of soda ash as furnished by the producers during the years 1961, 1962, 1963 and 1964 (January to March).

Statement showing rated capacity and production of units manufacturing Soda ash

(In tonnes)

Sl. No.	Name of the producer	Annual rated Capacity	1961		1962		1963		January-March 1964	
			Production		Production		Production		Production	
			Gross	Available for sale	Gross	Available for sale	Gross	Available for sale	Gross	Available for sale
1	Tata Chemicals . . .	132,000	93,604	78,537	100,827	97,825	143,070	128,394	42,132	37,262
2	Dhrangadhra Chemicals .	41,000	34,439	30,961	41,446	37,773	43,677	40,764	11,981	11,238
3	Saurashtra Chemicals . .	67,000	52,153	27,447	63,722	36,625	77,222	49,232	20,890	12,926
4	Sahu Chemicals . . .	37,400	11,271	11,271	11,210	11,210	16,143	16,143	2,927	2,927
	TOTAL	277,400	191,467	148,216	227,205	183,433	280,112	234,533	77,930	64,353

NOTE.—The figures of production against Serial No. 1 include the production of heavy soda ash of 132 tonnes in 1961, 13,940 tonnes in 1962, 28,230 tonnes in 1963 and 7,772 tonnes during January-March 1964. The capacity of the unit for heavy soda ash is 80 tonnes per day.

5.4.2. A comparison of actual production with rated capacity would indicate that there has been some under-utilisation of capacity. There has been an increase in the aggregate production but while Tata Chemicals has reached its anticipated expansion of output, there is some under-utilisation of capacity in the case of Saurashtra Chemicals which is even more pronounced in the case of Sahu Chemicals. This has been attributed by the latter to the new process of production adopted by it which has not yet been perfected. It is also due to some extent to the imbalance of the different sections of its plant which is expected to be corrected in due course. The representatives of the company also complained at the public inquiry that inadequate supplies of B.P. hard coke and interruptions of power supply were responsible for low production.

5.4.3. With regard to future production Tata Chemicals anticipates the same output in 1964 and 1965 as at present except for increase in the production of heavy soda ash to about 60,000 tonnes per annum. Saurashtra Chemicals also expects an increase in production to almost double its present capacity during the course of the next three years. The other two companies, namely, Dhrangadhra Chemicals and Sahu Chemicals, have actually asked for revocation of the licences for expansion granted to them. Thus only Tata Chemicals and Saurashtra Chemicals have plans to expand during the next three years. As already mentioned the licence granted to Bhiwandiwalla & Co., has been recommended for revocation by the D.G.T.D. But a new production unit in Madras by Parry & Co., is likely to be set up. Adopting the modified Solvay process its initial daily capacity of 200 tonnes allows scope for doubling. The unit which is being established with Japanese collaboration needs an estimated capital investment of Rs. 4.5 crores. We are not including it in our estimates of future expansion and capacity as it is unlikely to be in production within the next three years.

6. Domestic demand.

6.1. In our last estimates in 1961 we expected an offtake of 377,500 tonnes of soda ash in 1963 inclusive of 81,000 tonnes of heavy soda ash. For 1964 our estimated domestic demand was then of the order of 425,000 tonnes of soda ash inclusive of 91,000 tonnes of heavy soda ash. During the present inquiry the producers have not individually furnished estimates of demand for the different consuming industries but have agreed to abide by the figures furnished by the Alkali Manufacturers' Association. The D.G.T.D. has also furnished estimates of demand for different consuming industries. The two sets of figures along with the Commission's estimates for 1964 made during the last inquiry are tabulated below:—

(in '000 tonnes)

Sl. No.	Name of the consuming industry	Commission's estimate in its last Report	1964		1965		1966		1967	
			Assn.	D.G.T.D.	Assn.	D.G.T.D.	Assn.	D.G.T.D.	Assn.	D.G.T.D.
1	Glass industry excluding bangles.	100	75	90	82·5	100	90	114	105	130
2	Bangle industry	15	13	9	14	10	15	11	16	12
3	Silicate industry	41	30	26	35	27	40	28	45	29
4	Textile industry	14	14	9	15	9·5	16	10	17	11
5	Paper industry	10	10	12	11	13	12	14	13	15
6	Chemical caustic soda industry	50	33	32	33	33	33	35	33	37
7	Bichromate industry	11	7	8	8	9·5	9	10	10	11
8	Sodium Bicarbonate industry	16	6·4	8·5	7·8	9	9·2	10	11	11
9	Dhobies and laundries	150	100	100	115	110	130	120	150	130
10	Aluminium and other miscellaneous industries	18	15·6	15·5	16·7	19	19·2	28	19·3	34
	TOTAL	425	304	310	338	340	373·4	380	419·3	420
	Heavy ash (for glass) and bichromates industry	91	82	N.F.	90·5	N.F.	99	N.F.	115	N.F.
	Light as (for the rest)	334	222	N.F.	247·5	N.F.	274·4	N.F.	304·3	N.F.
	TOTAL	425	304	310	338	340	373·4	380	419·3	420

N.F.—Not furnished.

6.2. It is significant that the Association's estimate of demand for 1964, which takes note of apparent consumption in the recent period and does not take note of the growth *pari-passu* of consumer industries, is placed at only 304,000 tonnes as compared with our estimate of 425,000 tonnes. The Association's estimates for the subsequent years are accordingly pitched at the low figures of 338,000 tonnes for 1965, 373,400 tonnes for 1966 and 419,300 tonnes for 1967. In other words the Association hopes to reach the estimate of 425,000 tonnes for 1964 only in 1967 which appears to be extremely unrealistic. The slightly higher estimates furnished by D.G.T.D. also seem to approximate to those furnished by the Association. When discussing the basis of their calculations we found that the Association's estimate seems to depart considerably from the targets of output fixed by the Third Five Year Plan of the consuming industries like glass, silicate, textiles, etc.. on the ground that the actual performance of these industries had not so far reached the targets fixed by the Planning Commission. Though all the Plan targets might not have been reached during the Third Five Year Plan, for any further perspective planning, it may not be correct to assume that they are unlikely to be reached even during the next plan period. In respect of textiles the Association seemed to have underestimated the output even as compared with the estimates furnished by the Textile Commissioner. Another important factor in estimating the future demand is to take note of the potential demand for soda ash by the consuming industries which has remained unsatisfied during the period. Most of the consuming industries complained during the public inquiry that their demands for soda ash were not fully complied with. To take their probable demand into our calculations it is necessary to include in our estimates the figures of production of the consuming industries like silicate, sheet glass, bangles, etc. So we are inclined to think that it would be more accurate to estimate the probable demand on the basis of the Plan targets of the consuming industries as modified by the figures furnished by the consuming industries of their requirements. We, therefore, feel that a recalculation of the demand on this basis may be necessary instead of accepting the figures of probable demand furnished to us.

6.2.1. The estimate of demand furnished by D.G.T.D. seems to have been largely influenced by the apparent consumption of soda ash during the year 1963 given below:—

	Tonnes
Sales	2,38,398
Self consumption	48,579
TOTAL	2,86,977
Imports	14,585
APPARENT CONSUMPTION	3,01,562

A disquieting feature of the above data is the extremely low figure of imports during this year no doubt dictated by scarcity of exchange. Whereas imports for 1961 was 49,235 tonnes and for 1962 it was 45,326 tonnes, the imports were only 14,585 tonnes during 1963. This factor has been largely responsible for the low apparent consumption during 1963. These figures do not and cannot reflect the amount of unsatisfied demand existing during the year. As compared with the Commission's estimate of demand of 377,500 tonnes for 1963, the apparent consumption of 301,562 tonnes indicates a great short-fall. While the consequence of this shortfall has been suffered by the consuming industries it cannot also be made the basis for calculation of future demand for soda ash though the producers' Association claims to have reached near self-sufficiency. So we find it difficult to accept even the estimate furnished by D.G.T.D.

6.2.2. After discussion at the public inquiry our calculations of the probable demand of soda ash are placed at 401,770 tonnes for 1964, 450.700 tonnes for 1965, 494,620 tonnes for 1966 and 538,570 tonnes for 1967. In making our estimates we have adopted the targets fixed by the Planning Commission for the consuming industries. The only modifications made by us are with reference to silicate, textiles and chemical caustic soda. In the case of silicate we have adopted the estimates of consumption as furnished by the Non-Power Soap Manufacturers' Association. With regard to textiles we have taken the figures of probable consumption as furnished by the Textile Commissioner since it is more authentic than the figures furnished by the Alkali Manufacturers' Association. In respect of chemical caustic soda we have taken a figure lower than the estimate of the Planning Commission, as the offtake of soda ash for the production of caustic soda by the chemical process will hereafter be restricted to the operation of Saurashtra Chemicals, as Tata Chemicals have given up the process. Details of our estimates are given in the table below:—

(In tonnes)

Sl. No.	Consuming industries	1964	1965	1966	1967
1	Glass	126,000	140,000	154,000	1,68,000
2	Bangles				
3	Silicate	40,000	45,000	50,000	55,000
4	Textiles	14,870	15,380	16,000	16,650
5	Paper	16,900	20,000	23,100	26,200
6	Chemical caustic soda	35,200	40,320	40,320	40,320
7	Bichromates	9,200	10.000	10,800	11,600
8	Sodium bicarbonate	13,200	15,000	16,800	18.600
9	Dhobies & laundries	120,000	135,000	150,000	165,000
10	Miscellaneous	26,400	30.000	33,600	37,200
	TOTAL	401,770	450,700	494,620	538.570

6.2.3. On a comparison of the estimates of demand as calculated by us in the previous paragraph with the rated capacity and the actual production in the preceding year it is obvious that there is a considerable shortfall in output. Consequently, any facile assumption that self-sufficiency has already been reached in respect of soda ash production in the country is untenable. There is not only the need for the existing producers to make up the leeway and expand further if possible but also there is a necessity for at least one or two more new units to go into production as early as possible. Till then the gap between indigenous output and the estimated demand has to be covered through imports. The imports in 1963 have been very meagre and it seems to have already had its impact on the consumers of soda ash in the country, who have been denied even their minimum requirement. Failure to meet the shortfall in supply would in turn mean unutilised capacity in all those industries which require soda ash for their operation.

7. Raw materials, power and fuel.

7.1. The essential raw materials required in the manufacture of soda ash are common salt, limestone, ammonium sulphate, ammonium chloride or synthetic ammonia. Sulphur, sodium sulphide and soda ash are the ancillary chemicals used in the process of production. Hard coke, coal, furnace oil and light diesel oil are the main fuels. Hard coke and limestone are used in the lime kiln for the production of lime and carbon dioxide gas required in the standard Solvay process. Hard coke is also used for the production of hydrogen, nitrogen and carbon dioxide by way of water gas for the modified Solvay process. Soda ash is used for brine purification. Coal, furnace oil and light diesel oil are used as fuel in boilers as well as in calciners. Most of the raw materials are indigenously available. Only sulphur, and to some extent sodium sulphide and ammonium sulphate are imported.

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7.1.1. *Salt.*

7.1.1.1. Except Sahu Chemicals which obtains its entire requirements of common salt from Hindustan Salts Ltd., others have their own salt works. Tata Chemicals is having its salt works at Mithapur and Okhamandal. Saurashtra Chemicals has its salt works in Porbandar and Jamnagar. Dhrangadhra Chemicals has its salt works in Kuda. All of them produce by solar evaporation of sea brine salt having an average purity of about 98 per cent but their production is not fully adequate and needs to be supplemented by purchases from outside.

7.1.1.2. There has been a general complaint among the producers of soda ash against railways for the high freight rates charged by them on the movement of salt produced by them and also purchased from outside sources. Their contention is that their salt is being moved at the higher rate under classification 37.5-A instead of being carried under 35-A. The stand taken by the railways is that a producer has an option over the freight rates and if he does not exercise his choice by conforming to the regulations regarding protective measures to be carried out for making it eligible to be carried at the rate under the lower classification, they are not to be blamed for charging a higher freight rate. They also contend that the freight differential does not fully cover the incidence of higher corrosion to railway wagons. Actually the option cannot be exercised by the soda ash manufacturers as the rebate available for carrying out protective measures is not adequate to cover its expenditure incurred for the purpose. So virtually salt has to be carried by the higher rate and the complaint to that extent is legitimate. When a choice of rate is offered the rebate must be at least equal to the expenditure involved in carrying out the protective measures. At present it would appear that the rebate or lower rate is not even equal to 50 per cent of the expenses required for implementing the protective measures required by the railways. Therefore, in fairness to the users, the railways can either increase the rebate so as to adequately cover the expenditure involved in consignors carrying out the protective measures or insist only on such protective measures which will not involve much expenditure for the users. Some of the users have already suggested alternative measures such as cleaning with lime water which is not very expensive. If the railways could accept some such alternative protective measures for the wagons and enable soda ash manufacturers to avail themselves of the rate under 35-A classification it would help considerably a basic industry like the manufacture of soda ash. It is a basic chemical required in several other chemical industries and as such any reduction in its cost at the initial stage would be reflected in the form of lower costs at the subsequent stages of its use.

7.1.1.3. One of the producers has complained that the freight rates on salt are burdensome for long hauls and the break of gauge and careless loading in wagons full of impurities also cause difficulties. Sahu Chemicals has also complained about the high prices charged by Hindustan Salts Ltd., for salt supplied by it. We could only suggest that the authorities concerned should look into and redress the grievances. The pricing policy of Hindustan Salts Ltd. may also take into consideration the fact that in their mutual interest it should not affect adversely the indigenous industries engaged in the manufacture of basic chemicals. If the high price of salt is due to the cost of production it could perhaps be reduced to some extent if recommendations made by us in our last Report in 1961 like the installation of necessary equipment for bulk handling of salt are implemented.

7.1.2. *Limestone.*

7.1.2.1. Limestone is one of the very important raw materials required in the standard Solvay process for the production of soda ash. Three of the producers who adopt this process use limestone for producing carbon dioxide gas and lime. Tata Chemicals obtains its requirements of limestone from quarries at and around Ranavav. Dhrangadhra Chemicals obtains its limestone from Chorward, Adri and Panchi besides Ranavav. Saurashtra Chemicals gets its limestone supplies from Kajiawadri and Adityana. There seems to be a fear that the existing limestone of a quality good for chemical industries in the areas at present leased are extremely inadequate for the development of the industry. It is, therefore, urged that every care should be exercised to ensure that the high grade limestone deposits at Ranavav are not used up in the manufacture of other products which can use inferior grades of limestone. Conservation of mineral resources is a very important aspect of planning and economic development and we, therefore, recommend that under the supervision of a suitable authority a more discriminating use of limestone should be enforced.

7.1.2.2. Tata Chemicals has also represented that its plea for concessional freight rate on the movement of limestone has been turned down by the railways on the ground that such a rate would be granted only if it could prove that the traffic cannot bear the existing rate. It is certainly a matter of opinion as to when a traffic can be said to be unable to bear a particular freight rate. An overall loss in the balance sheet of the company is not necessarily the criterion to assess the inability of a traffic to bear the freight rate. Any freight rate can be borne for that matter if it could be allowed to be reflected in higher prices. When our endeavour is to reduce the price structure of the industry our approach to freight rates for an industrial raw material should not be only from the stand point of the balance sheets of the companies. It should, on the other hand, be calculated in terms of the quantity offered for transport and aggregate revenue earned by the railways on that particular traffic. Benefits derived by the railways by the quantum of traffic offered and its regularity may be partly shared with the industry. We, therefore, recommend that the freight structure in respect of limestone used by the chemical industries may be reviewed from this fresh angle of approach. Dhrangadhra Chemicals has informed us that station to station freight rates which were being offered to them on the transport of limestone have been withdrawn since May 1962, resulting in an increase of 16 per cent of freight rates on limestone for the company. At the public inquiry we were informed that this step was taken by the railways as other transporters of limestone also asked for similar concessions. As station to station rates are offered to encourage traffic between two points and enable the consumers to get the raw materials at a reasonable price, we suggest that it would be desirable for the railway authorities to re-examine the issue.

7.1.3. *Coke.*

7.1.3.1. There seems to be general dissatisfaction among all the producers regarding availability and the quality of coke. Tata Chemicals has stated that due to the overall shortage of metallurgical coke it is facing serious difficulties in getting its requirements and it is compelled to use nut coke which is rejected by the steel industry. It has been obtaining its present supply of nut coke from Durgapur, Bhilai, Jamshedpur and Rourkela depending on the allotments made by the Coal Controller. Tata Chemicals has complained that the quality of nut coke deviated seriously from the specification on size and contained as much as 25 per cent fines which have to undergo screening before use adding considerably to the cost of production. Dhrangadhra Chemicals also complained that it has been experiencing serious difficulties in getting adequate supplies of coke, as its allotment has been drastically reduced. Alternative sources are not only expensive for it but it had to accept beehive coke for operating its factory. Saurashtra Chemicals has also complained that it has been compelled to use nut coke which is not of proper size. This is said to lower its efficiency of production.

7.1.3.2. In the case of Sahu Chemicals B. P. hard coke seems to be an essential ingredient owing to the adoption of modified Solvay process by it. The poor quality of the coke supplied to it seems to be creating operational difficulties in the gas plant and has its impact not only on its final output but also on its efficiency. So long as B.P. hard coke is an important raw material for modified Solvay process which has been permitted in the case of Sahu Chemicals, we feel that it would only be fair if the allotment of coke is made according to quality needed to the various producers keeping in view their special requirements.

7.1.3.3. We are, however, informed by the D.G.T.D. that the transport difficulties have eased and stock position has improved since the transfer to the Central Government of quota allocation in respect of coke and coal. Producers are now said to be obtaining their coke and coal as recommended by the D.G.T.D. on a priority basis. We are also told that producers are being allotted *ad hoc* supplies from the steel plants.

7.1.4. *Ammonium sulphate.*—With the exception of Sahu Chemicals which manufactures ammonia for self-consumption, other producers use ammonium sulphate or ammonium chloride as source of ammonia. They get their supplies of ammonium sulphate through the Regional Controller of Food, Bombay, and ammonium chloride from Sahu Chemicals. There has been no complaint regarding the supplies of either of these materials. It is, however, gathered that they use both ammonium sulphate and ammonium chloride though at the time of the last inquiry they had expressed willingness to switch over to the use of ammonium chloride as it was indigenously available. This may perhaps be due to the freight rates on ammonium chloride which have not been reduced to the level of rates applicable to fertilisers when supplied to industrial consumers.

7.2. *Fuel.*

7.2.1. The main fuels utilised in the industry are coal, furnace oil, light diesel oil and fire wood. Tata Chemicals uses coal and furnace oil as fuel for generating steam as well as for calcination. Dhrangadhra Chemicals uses light diesel oil and small quantities of firewood in addition to coal and furnace oil for the purpose. Sahu Chemicals uses coal as main fuel in view of its proximity to collieries and Saurashtra Chemicals purchases steam from the Gujarat Electricity Board and uses furnace oil for calcination. In view of the general shortage of high grade coal, units in Saurashtra area are reported to have taken effective steps to work with slack size or lower quality coal. The use of furnace oil has not been encouraged as the excise levy on it continues to exist as at the time of our last inquiry. A plea has been made by the producers that the levy on furnace oil must be adjusted in such a way as to make economic parity between coal when its use is subsidised and furnace oil.

8. Quality of domestic soda ash.

8.1. The Indian Standard Specification for soda ash, technical, was first formulated in 1950 as IS:251-1950 and has since been revised twice, first in 1956 to up-grade the requirements of quality and the second in 1962 to make suitable modifications in respect of sampling and some of the test methods.

8.2. *Quality.*

8.2.1. The indigenous production of soda ash comprises generally two grades, namely, light and dense. The medium grade produced by Sahu Chemicals may also be included in the light grade. The light grade accounted for 88 per cent of the total production of soda ash and the heavy grade for 12 per cent in 1963. In connection with the present inquiry we have received comments about the quality from Government Departments, producers, consumers and associations. The consensus of opinion of various interests including Government Departments and D.G.T.D. is that the quality of the indigenous soda ash, both light and heavy, by and large, conforms to the Indian Standard Specifications.

8.2.2. *Government Departments.*—The Directorate General of Supplies and Disposals has stated that the soda ash produced by Tata Chemicals, Saurashtra Chemicals and Dhrangadhra Chemicals conforms to I. S. Specification, but the soda ash manufactured by Sahu Chemicals does not conform to the required specification in regard to chemical composition and density.

8.2.3. *Consumers' Associations.*—The Millowners' Associations of Bombay and Ahmedabad have expressed satisfaction about the improvement of the quality of the indigenous soda ash. Non-Power Soap Manufacturers' Association, Bombay, and Glass Industrial Syndicate, Ferozabad have given adverse comments about the quality of the indigenous soda ash, which is considered inferior to the imported soda ash. The Glass Industrial Syndicate states that bangles made out of the indigenous light soda ash developed defects involving loss to the industry. Among the few complaints about the quality, the main defects pointed out relate to low specific gravity of dense soda ash and the presence of high moisture and sodium chloride content and other impurities in the soda ash produced by units other than Tata Chemicals. Majority of the consumers of soda ash have, however, expressed satisfaction regarding the quality of the indigenous product.

8.2.4. All the producers have reported to us about the quality control methods adopted by them for controlling quality through the various intermediate stages of production. The quality control method includes drawing of samples of the intermediate and finished products at predetermined intervals, carrying out analysis at the analytical control laboratory located within the plant and subsequently recording of the results obtained systematically. This is expected to ensure quality of the finished product. Tata Chemicals has stated that a Product Inspectorate Unit has been constituted to exercise vigilance on the quality of all the products so that despatch of any sub-standard quality from the works may not be permitted. On receipt of certain complaints about particle size of its dense ash it seems to have evolved a particle size specification for glass industry in consultation with the leading glass technologists and is understood to be adhering to the specification. Dhrangadhra Chemicals and Saurashtra Chemicals have stated that the quality of their products was acceptable to the consumers and the complaints received are very few. Sahu Chemicals claims that the bangle and glass industry at Ferozabad prefer its soda ash on account of the semi-dense nature as they can avoid the purchase of imported heavy soda ash for being mixed with indigenously produced light soda ash.

9. Import control policy and imports.

9.1. *Import control policy.*—Soda ash is classified for import purposes under serial number 26, of part V, Section II of the Import Trade Control Schedule. During the licensing periods from April 1960 to March 1964 imports of light soda ash as well as those of natural and synthetic heavy soda ash were canalised through the State Trading Corporation of India. During these periods licences were also granted to mills, registered cloth processors and exporters to import, among other items, soda ash against the exports of cotton fabrics. This policy is being continued at present. For determining the actual quantities to be imported, the State Trading Corporation takes the advice of the D.G.T.D. which reviews the position every six months in consultation with the Development Council for Alkalies and Allied Industries.

9.2. *Imports.*—Details of imports of soda ash during the last three calendar years as compiled from the 'Monthly Statistics of the Foreign Trade of India' are given in statement in Appendix IV. Imports during the last three years were as indicated below:

Year	Dense soda ash		Light soda ash		Others		Total	
	Qty. Tonnes	Value Lakh Rs.	Qty. Tonnes	Value Lakh Rs.	Qty. Tonnes	Value Lakh Rs.	Qty. Tonnes	Value Lakh Rs.
1	2	3	4	5	6	7	8	9
1961 .	37,918	74·94	11,283·0	19·95	34·0	0·15	49,235·0	95·04
1962 .	43,072	79·38	2,252·1	4·05	1·7	0·04	45,325·8	83·47
1963 .	4,773	9·12	9,165·8	15·12	645·7	1·32	14,584·5	25·56

Existing rates of duty.

10. Soda ash is assessed to customs duty under item No. 28(4) of the First Schedule to the Indian Tariff Act, 1934, the relevant extract from which showing the current rates of duty is reproduced below:

Item No.	Name of article	Nature of duty	Standard rate of duty	Preferential rate of duty if the article is the produce or manufacture of			Duration of protective rates of of duty
				The United Kingdom	A British Colony	Burma	
1	2	3	4	5	6	7	8
28(4)	Soda ash including calcined natural soda and manufactured sesquicarbonates	..	..	..	..	5 per cent *ad valorem*	
	(a) manufactured in a British Colony.	Protective	Rs.8·37 per quintal	..	..	..	December 31, 1964.
	(b) not manufactured in a British Colony.	Protective	Rs. 11·32 per quintal	..	..	..	December 31, 1964.

NOTES :—(i) Excise duty at the rate of Rs. 2 per quintal was first imposed by the Finance Act, 1961 (*vide* Item 14A of Excise Schedule). The same rate continues without any modification. Imports of soda ash are subjected to countervailing excise duty under Section 2A of the Indian Tariff Act, 1964.

(ii) By the Finance Act, 1963 and continued by the Finance Act 1964, an additional customs duty of 10 per cent of duty is leviable with effect from 1st March 1963.

11. Costs of production and estimated fair ex-works prices of light and heavy soda ash.

11.1. Our Cost Accounts Officers examined the costs of production of light soda ash manufactured by Tata Chemicals and Saurashtra Chemicals; of medium heavy soda ash by Sahu Chemicals and of heavy soda ash by Tata Chemicals. The periods for which the actual costs of production have been examined were the year ending 30th June 1963 for Tata Chemicals; year ending 31st March 1963 and a further period of 9 months ending 31st December 1963 for Saurashtra Chemicals and the year ending 31st March 1963 for Sahu Chemicals. The respective cost reports are being forwarded to Government as confidential enclosures to this Report. On the basis of data obtained by the Cost Accounts Officers, we have estimated the fair ex-works prices of these units for the years 1965 to 1967. Sahu Chemicals did not maintain their accounts so as to show separately the total joint costs upto the point when sodium bicarbonate separates out from the process and the specific costs incurred thereafter for production of medium heavy soda ash and ammonium chloride respectively. The future estimates for this unit had, therefore, to be developed on an approximate basis, which cannot be considered very satisfactory. Further, even after assuming the future production of this unit at 37,000 tonnes per annum as against the actual production of 13,755 tonnes in the year 1962-63, the estimated fair ex-works price of medium heavy soda ash for this unit works out to a figure higher than the fair ex-works price of heavy soda ash produced by Tata Chemicals, which is anomalous. In view of this and also considering the fact that this unit has not yet been able to surmount its teething troubles and establish regular production, we consider that it would be unrealistic to use the fair ex-works price of medium heavy soda ash produced by it for purposes of ascertaining the quantum of protection necessary. Accordingly, we have dropped this unit from any further consideration in this context.

11.2. Our estimate of fair ex-works price of light soda ash to be produced by Tata Chemicals during the period 1965 to 1967 works out to Rs. 371.87 per tonne or Rs. 18.59 per 50 kgs. and that of Saurashtra Chemicals to Rs. 340.26 per tonne or Rs. 17.01 per 50 kgs. The fair ex-works price for heavy soda ash to be produced by Tata Chemicals works out to Rs. 407.01 per tonne or Rs. 20.35 per 50 kgs. Compared to our previous estimates, the present estimated fair ex-works price for Tata Chemicals shows a considerable increase, which is mainly due to a rise in the cost of raw materials and in the element of depreciation. The various factors, which we have taken into account in arriving at these estimates, are described below:

11.3.1. *Production.*—The rated capacity for the production of light soda ash of Tata Chemicals and Saurashtra Chemicals are given in paragraph 5.3. Tata Chemicals has planned to instal certain plant and machinery some of which are in the nature of stand-by, in view of which it anticipates that its average output in the future may be somewhat better than the rated capacity assumed. The production of light soda ash for this unit has been assumed at 144,000 tonnes per annum. Out of the above production of light soda ash, a quantity of 30,600 tonnes is estimated to be diverted for the production of 30,000 tonnes of heavy soda ash. For Saurashtra Chemicals, production has been assumed at 120,000 tonnes per annum for the years 1965 to 1967. The soda ash equivalent of sodium bicarbonate to be converted into caustic soda in this case is estimated at about 32,000 tonnes.

11.3.2. *Consumption and price of raw materials.*—The consumption of raw materials for all the units has been estimated in line with their performance during the period for which actual costs have been ascertained. In the case of Tatas, the consumption rates of different materials are found to be comparable to our previous estimates; the rise in the present estimates of this item is mainly due to a rise in the delivered cost of coke and to a rise in the cost of quarrying and transport of limestone. The latest available prices have been taken into account for all the materials, including increases in railway freight and other factors.

11.3.3. *Conversion charges.*—The conversion charges have been estimated after making due provision for likely increase in wages which is under reference to Labour Tribunal in the case of Saurashtra Chemicals, the normal annual increases in salaries and wages and extra staff required for increase in capacity. Increase in the pithead rates of coal and railway freight thereon, has been taken into account in estimating the cost of steam and power. The incidence per tonne of soda ash of these increases has, however, been substantially counteracted by the increase in the production assumed.

11.3.4. *Depreciation.*—Since our last inquiry in the year 1961, the income-tax authorities have revised upwards the rates of depreciation by 50 per cent for plant and machinery for chemical industries coming into contact with corrosive chemicals. The depreciation taken into account in these estimates are in accordance with these revised rates. While calculating depreciation, we have also taken into account the plant and machinery likely to be installed and put into use during the next three years. The rise in the incidence of depreciation compared to our previous estimates, is partly due to the enhanced rates of depreciation now allowed for the chemical industries.

11.3.5. *Packing.*—The cost of gunny bags has come down substantially since our last inquiry in 1961; and hence, the incidence of packing charges shows a substantial reduction compared to our previous estimate.

11.3.6. *Return.*—The return has been allowed as in the past at 12 per cent on the capital employed, which is estimated at the average net value of assets together with the working capital assessed at an amount equivalent to 5 months' cost of production exclusive of depreciation.

11.3.7. *Margin for contingencies.*—In view of our taking into account material costs, railway freight and other incidentals at the latest rates, an allowance of Rs. 10 per tonne for contingencies to cover unforeseen increases in cost is considered adequate and this amount has been allowed in our estimates.

11.3.8.1. We give below two statements showing our estimates of fair ex-works prices of light soda ash and heavy soda ash respectively. For light soda ash, the statement indicates the figures of (a) our estimate of fair ex-works price as stated in the 1961 Report; (b) the actual cost of production; and (c) our estimate of fair ex-works price for the period 1965 to 1967 in respect of Tata Chemicals and Saurashtra Chemicals. In the other case, there being no previous estimate, the statement indicates only the latter two items:

Statement showing fair ex-works prices of light soda ash

		Tata Chemicals Ltd., Mithapur			Saurashtra Chemicals, Porbandar		
		Commission's estimate 1961	Cost of production 1962/63	Estimate for 1965 to 1967	Cost of production 1962/63	Cost of production 1963/64 (9 months)	Estimates for 1965 to 1967
	Production (tonnes)	1,20,000	1,28,103	1,44,000	67,803	57,177	1,20,000
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	Raw materials (including hard coke and fuel oil for production of lime and hydrogen sulphide)	109·24	123·58	128·73	136·26	115·93	121·00
2	Conversion charges (excluding depreciation)	102·03	101·37	103·97	88·86	98·81	97·58
3	Depreciation	38·22	40·51	45·72	53·38	49·06	44·05
4	Packing charges	37·39	25·67	28·20	23·95	25·67	28·48
5	Contingencies	10·00	..	10·00	..	..	10·00
6	Royalty to Government	2·25	2·44	2·45	..	..	..
7	Cost of production	299·13	293·57	319·07	302·45	289·47	301·11
8	Return at 12% on capital employed	53·06	..	52·80	..	..	39·15
9	Fair ex-works price per tonne	352·19	..	371·87	..	..	340·26
	Fair Ex-Works price per 50 Kgs.	17·61	..	18·59	..	..	17·01

Statement showing fair ex-works price of heavy soda ash

	Tata Chemicals, Mithapur	
	Cost of production for 1962/63	Estimate for 1965 to 1967
Production (Tonnes)	21,592	30,000
	Rs.	Rs.
1. Raw materials	126·05	131·30
2. Conversion charges (excluding depreciation) . .	120·29	125·83
3. Depreciation	49·33	54·20
4. Packing charges	16·93	19·78
5. Contingencies	..	10·00
6. Royalty to Government	2·81	2·90
7. Cost of production	315·41	344·01
8. Return at 12% on capital employed	..	63·00
9. Fair ex-works price per tonne	..	407·01
Fair ex-works price per 50 kgs	..	20·35

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11.3.8.2. It will be seen from the above tables that our estimate of fair ex-works price of light soda ash for Saurashtra Chemicals is lower than that of Tata Chemicals. We have, however not examined the costs of the remaining producer of light soda ash, namely, Dhrangadhra Chemical Works. The capacity of this unit is much smaller than either of Tata Chemicals or Saurashtra Chemicals; and according to our past experience, the cost of light soda ash for this unit is likely to be higher than that of Tata Chemicals. In view of this, we consider it reasonable to take the fair ex-works price of Tata Chemicals instead of the lower price of Saurashtra Chemicals as representative for the industry for purposes of assessing the quantum of protection required by the industry for light soda ash.

11.3.8.3. In the case of heavy soda ash, so far only Tata Chemicals has been in actual production. In the case of Saurashtra Chemicals no estimates could be worked out in the absence of any actual data as the plant was not in regular production. We have, therefore, taken the fair ex-works price of heavy soda ash produced by Tata Chemicals for the purpose of assessing the quantum of protection necessary.

11.3.9. *Freight disadvantage.*—For purposes of arriving at the quantum of protection, it is necessary to assess the relative freight disadvantage, which the indigenous producers almost all of whom are located in the Gujarat State, suffer as compared to the importer, who can arrange the supply from the nearest port. The actual disadvantage suffered will depend upon the pattern of distribution; but we consider that a sum of Rs. 2 per 50 kgs. on the average will adequately cover any such possible disadvantage. Fair ex-works price including freight disadvantage for purposes of assessing the quantum of protection has, therefore, been taken at (a) Rs. 20.59 per 50 kgs. for light soda ash; and (b) Rs. 22.35 per 50 kgs. for heavy soda ash.

C.I.F. prices and landed costs.

12. At the last inquiry of the Commission in 1961, the c.i.f. price of Rs. 171.05 per tonne of imported soda ash from Bulgaria was adopted for the purpose of assessing the quantum of protection. For purposes of the present inquiry a statement giving the c.i.f. prices of recent imports as furnished by the Collectors of Customs of principal ports, State Trading Corporation of India Ltd., and distributors of imported soda ash is given in Appendix V. It is observed from the statement that the lowest c.i.f. price at which imports have taken place during recent months is Rs. 160.00 and it relates to light soda ash from Bulgaria. This is the price at which imports have been made by the State Trading Corporation of India Ltd. Since there have been no imports at prices lower than this we have adopted this for assessing the quantum of protection needed by the industry. In the case of heavy soda ash we did not take in our last inquiry any import price for assessing the quantum of protection for it as indigenous production then was not sizable. During this inquiry we have taken Rs. 206.66 which is the import price of heavy soda ash from Kenya.

Comparison of the fair ex-works prices of indigenous soda ash with the landed costs ex-duty of imported material.

13. In the statement given below, a comparison is made of the fair ex-works prices including freight disadvantage of indigenous light and heavy soda ash as estimated in paragraph 11.3.9. with the landed costs without duty, of respective kinds of soda ash:—

	Light Soda ash Rs. per 50 kgs.	Heavy Soda ash Rs. per 50 kgs.
	Rs.	Rs.
1. Fair ex-works price including freight disadvantage .	20·59	22·35
2. C. i. f. price of imported soda ash	8·00	10·33
3. Clearing charges	0·46	0·46
4. Landed cost ex-duty (2 + 3)	8·46	10·79
5. Difference (1—4)	12·13	11·56
6. Existing rate of duty (standard)	5·66	5·6

14. Measures of protection and duration.

14.1. In view of the prevailing restrictions on imports which may continue due to the balance of payment difficulties, the manufacturers' association and some producers had contended that continuance of tariff protection to the industry was not necessary. But they averred at the public inquiry that in the event of any easing of these restrictions the industry which stood in need of help in various ways could *not* withstand foreign competition. We have already indicated how the industry, a high cost one, needs to be helped further for expansion, improving technology and diversification of production processes. These are necessary for its better development as well as for lowering the burden on the consumer. While indigenous output of soda ash is not still adequate to meet essential domestic demand, its cost disparities *vis-a-vis* imports have grown wider. Further, import restrictions dictated by economic expediency are in no sense part of a scheme of tariff protection and constitutes no suitable alternative to duty protection and the watch over an industry's progress going with it. In the circumstances, we do not consider the industry is yet in a stage to be de-protected.

14.2. In the statement given in paragraph 13 the quantum of disadvantage to the indigenous soda ash industry has been calculated with reference to both light soda ash and heavy soda ash. The quantum has gone up from Rs. 10.50 per 50 kgms. for soda ash in 1961 to Rs. 12.13 at present. This is on account of the fact that while there has been an increase in our current estimate of fair ex-works price over the previous estimate, the c.i.f. price of imported light soda ash now adopted by us is lower than the c.i.f. price adopted in the last inquiry. This has made a marginal difference in the import price which when added to the increase in fair ex-works price of light soda ash produced in the country accounts for the difference mentioned above. On such a comparison the industry would need for its light soda ash a higher rate of protection of Rs. 12.13 per 50 kgms. (standard). In respect of heavy soda ash the quantum of disadvantage is Rs. 11.56 per 50 kgms. This is lower than that for light soda ash as the import price of heavy soda ash adopted by us is relatively higher. But we do not propose to suggest any enhancement of the existing rates of duty as it would prove a burden to the indigenous industries consuming soda ash so long as sizable imports, even when regulated, are necessary to meet the shortfall between indigenous output and estimated demand. So we recommend that the existing rates of protective duty, namely, Rs. 11.32 per quintal (standard) and Rs. 8.37 per quintal (preferential), exclusive of the additional import duty and the countervailing excise duty, may remain unaltered.

14.3. The above suggestion has been made on the ground that in the existing circumstances protection to the industry is more to bring it within the sphere of developmental measures that are being offered to protected industries rather than to offer a mere equalisation of price differential between indigenous production and imports. Further, so long as domestic production is not equal to demand and sizable imports are required, there is a risk of the producers not discharging their obligation as a protected industry and the burden of high prices on the consumers may continue. The effect of deprotection and removing the scope for independent scrutiny of their performance may make producers less cost-conscious. As already indicated in the preceding paragraphs the industry is today suffering from a high cost structure and the consumers are suffering from scarcity of the product. In other words, while the producers are not able to reduce their costs of production, the consumers have not only to suffer uncertainties of availability but also bear the burden of high prices. This is a problem that could be alleviated only by the State sponsoring the cause of both the producers and the consumers by offering suitable measures to bring about on the one hand reduction in the cost structure and also to meet the scarcity of supply by encouraging enhanced production of the existing units and also by setting up new units for the purpose. In the hope that these results could be achieved, we recommend that the protection to the soda ash industry should continue for a further period of three years from 1st January 1965 to 31st December 1967 and that the existing rates of protective duties, standard as well as preferential, should remain in force.

15. Distribution system and selling prices of soda ash.

15.1.1. *Tata Chemicals.*—The selling system of Tata Chemicals has not undergone any change since our last inquiry. Tata Oil Mills Co. Ltd., continues to be the sole selling agent for the whole country. It has 12 sales offices located in important metropolitan cities, and it has appointed 250 distributors all over the country. The selling agent is paid a commission of Rs. 16.50 per tonne which includes the discount of Rs. 8.00 per tonne allowed by the selling agent to its distributors. No commission is paid to the selling agent on sales made to other Tata concerns. A commission at half of the prescribed rate is payable on sales made directly to public bodies.

15.1.2. *Dhrangadhra Chemical Works.*—This company has appointed Dhrangadhra Trading Co. Private Ltd., as its sales organiser for its product from 1st March 1961. It canvasses and books orders for the products at the prices fixed by the company from time to time. The Sales Organiser has a net work of 16 well established distributors. The distributors have 327 retail dealers working under them throughout the country. Apart from channelising supplies through distributors, direct contacts are also being made by the Sales Organiser with bulk consumers. Annual contracts are made with them or arranged with them for acceptance by the company so that the overall distribution is established on a firm and healthy footing. The Sales Organiser undertakes *del credere* risk for the orders canvassed and booked by it and accepted and executed by the company. The Sales Organiser is paid a commission of one per cent on the selling price of soda ash manufactured by the company for the services rendered. Distributors are paid a commission/trade discount as the case may be at the rate of Rs. 10 per tonne direct by the company and the retail dealers are allowed to add Rs. 10 per tonne to the actual cost.

15.1.3. *Saurashtra Chemicals.*—This company has divided for the purposes of distribution the country into six regions, and has appointed regional agents for each of them. Under the regional agents 52 stockists have been appointed to take care of their area. Normally the area of a district is allotted to a stockist. The stockists always remain in close touch with the consumers and book orders. The company is now paying an overall commission of Rs. 10 per tonne of soda ash to be shared between the regional agents and the stockists in the proportion of 3:7. No other discount is allowed at any stage.

15.1.4. *Sahu Chemicals and Fertilisers.*—The company had regional sole selling agents for sale and distribution of soda ash produced by it. But as its soda ash is mainly used for industrial purposes and its sales are confined to neighbouring States, the company felt that sale and distribution could be more effectively handled through a smaller number of dealers and stockists. It has, therefore, terminated the sole selling agency and is at present arranging sales directly through dealers who are paid a commission of Rs. 7.50 per tonne.

15.2. Imported light soda ash and heavy synthetic soda ash are distributed by the State Trading Corporation of India Ltd., through the four selling agents namely, Imperial Chemical Industries (India) Private Ltd., Calcutta, Tata Oil Mills Co., Ltd., Bombay, India United Chemical Distributors Ltd., Calcutta and Chemical and Alkali Distributors Ltd., Bombay. Of these, the first two agents have got a net work of sales organisations throughout the country whereas the other two operate only in Bombay and Calcutta regions. These distributors acquire goods on behalf of the S.T.C., store it in their godowns and distribute it according to S.T.C.'s directions. The selling agents are allowed a commission of Rs. 37.40 per tonne on light soda ash and Rs. 25.00 (recently increased to Rs. 28.00) per tonne of synthetic heavy soda ash respectively. With regard to Magadi ash, Imperial Chemical Industries (India) Private Ltd., Calcutta, is the exclusive importer. The company is paid about 15 per cent of the landed cost of the material as commission which includes financing, storage and establishment charges.

15.3. *Views regarding selling system.*—On behalf of the textile industry, the Ahmedabad Millowners' Association and the Millowners' Association, Bombay, have expressed satisfaction regarding the existing system of distribution. However, Non-Power Soap Manufacturers' Association, Bombay, is not satisfied with the present system of distribution since supplies are not regular. It has suggested that distribution system should be changed and supply should be made directly to the consumers by the manufacturers without any intermediaries. The Glass Industrial Syndicate, Ferozabad, has alleged that there is inflation of prices and consumers are made to pay extra money to the local agents of the producers. One manufacturer of silicate has also complained about the selling policies of Dhrangadhra Chemicals and Saurashtra Chemicals.

15.4. The D.G.T.D. has also stated that it received a few complaints regarding supply of soda ash to the glass industry. These complaints, it is said, were aggravated because of the reduction in imports during 1963 due to scarcity of foreign exchange. In consultation with the interested parties and D.G.T.D. an informal distribution system seems to have been arranged. This system enabled the glass producers to get one-third of the production on priority basis under an informal allotment system. The quantum of imports by the S.T.C. was also increased as the demand was expected to rise. The sheet glass industry was supplied with heavy ash imported by the S.T.C. The bangle industry, however, was not satisfied with this arrangement and no satisfactory solution agreeable to all concerned seemed to have been evolved as yet. In the meanwhile, after de-control of prices complaints about distribution have increased from the bangle industry and from the silicate industry.

15.5. *Selling price.*—Control over the price of soda ash was removed by the Government of India by the Ministry of Petroleum and Chemicals, Notification No. 191, dated 16th December 1963. At the time of de-control the ceiling selling price of light soda ash fixed by Government was Rs. 380 per tonne, ex-works. The price of heavy soda ash was fixed at Rs 20 per tonne higher. Subsequent to decontrol all the four manufacturers have revised their selling prices. The current prices of Tata Chemicals are Rs. 410 per tonne ex-works for light soda ash and Rs. 435 per tonne ex-works for heavy soda ash and that of Dhrangadhra Chemicals is Rs. 435 per tonne, ex-works. The current price of Saurashtra Chemicals is Rs. 415 per tonne. Sahu Chemicals has increased its price to Rs. 465 per tonne f.o.r. destination rail head throughout India which includes a commission of Rs. 7.50 to dealers. It is seen that consequent on abolition of excise duty on carbon dioxide used in the process of production, in March 1964, Tata Chemicals has reduced its selling price by Rs. 10.30—Rs. 10.50 per tonne. The price of light soda ash is thus reduced from Rs. 420.30 ex-works to Rs. 410 and the price of heavy ash from Rs. 445.50 to Rs. 435. The current selling prices of imported soda ash fixed by S.T.C. are Rs. 495 per tonne, ex-godown, Calcutta, for light ash, Rs. 520 per tonne ex-godown, Calcutta, for heavy (synthetic) ash Rs. 500 per tonne f.o.r. Bombay for Magadi ash.

15.6. *Complaints on selling price.*—Some consumers including textile mills have complained that the prices of soda ash in the open market are higher than the prices at which supplies are received from the manufacturers. Buckingham and Carnatic Mills Co. Ltd., has complained that there has been an increase in the price of soda ash after the decontrol of prices and it is forced occasionally to make market purchase owing to inadequate supplies from the producers. The Commission consider that decontrol of prices should not have been construed as an occasion for making substantial price changes. It feels that a certain amount of self-restraint on the part of producers in a protected industry is called for with regard to their price policy and this is very necessary in the interests of national development.

16. Our conclusions and recommendations may be summarised as under:

Summary of conclusions and recommendations.

(i) Any further development of the soda ash industry in the Eastern and Southern regions of the country may have to adopt the modified Solvay process to obviate the necessity of obtaining limestone from long distances for which there is a large competing demand.

[Paragraph 5.2.2.]

(ii) Rationalisation of the railway freight structure, taking into consideration the necessity for the development of a basic chemical industry like the production of soda ash, might mitigate the hardship of the industry by reducing the incidence of transport cost on its operations.

[Paragraph 5.2.3.]

(iii) A reorganisation of the soda ash industry to achieve sizable economies in production on the lines suggested in paragraphs 5.2.2. to 5.2.5. should be a matter for earnest consideration by the industry.

[Paragraphs 5.2.2. to 5.2.5.]

(iv) The probable domestic demand for soda ash is placed at 401,770 tonnes for 1964, 450,700 tonnes for 1965, 494,620 tonnes for 1966 and 538,570 tonnes for 1967.

[Paragraph 6.2.2.]

(v) Any facile assumption that self-sufficiency has already been reached in respect of soda ash production in the country is untenable. There is not only the need for the existing producers to make up the lee-way and expand further, if possible, but also there is necessity for at least one or two more new units to go into production as early as possible.

[Paragraph 6.2.3.]

(vi) If the railways could accept some alternative protective measures for the wagons carrying salt and enable soda ash manufacturers to avail themselves of the rate under classification 35-A of the Goods Tariff, it would help considerably a basic industry like the manufacture of soda ash.

[Paragraph 7.1.1.2.]

(vii) Conservation of mineral resources is a very important aspect of planning and economic development and, therefore, a more discriminating use of limestone should be enforced under the supervision of a suitable authority.

[Paragraph 7.1.2.1.]

(viii) The railway freight structure in respect of limestone used by the chemical industries may be reviewed from the fresh angle of approach suggested in paragraph 7.1.2.2.

[Paragraph 7.1.2.2.]

(ix) The railway authorities should re-examine the issue of allowing station-to-station freight rates for the transport of limestone required by manufacturers of soda ash.

[Paragraph 7.1.2.2.]

(x) So long as B.P. hard coke is an important raw material for modified Solvay process which has been permitted in the case of Sahu Chemicals it would only be fair if the allotment of coke is made according to quality needed to the various producers of soda ash keeping in view their special requirements.

[Paragraph 7.1.3.2.]

(xi) The consensus of opinion of various interests, including Government Departments, is that the quality of the indigenous soda ash, both light and heavy, by and large, conforms to the Indian Standard Specifications.

[Paragraph 8.2.1.]

(xii) Protection to the soda ash industry should be continued for a further period of three years from 1st January 1965 to 31st December 1967 and the existing rates of protective duties, namely, Rs. 11.32 per quintal (standard) and Rs. 8.37 per quintal (preferential) exclusive of the additional import duty and the countervailing excise duty, should remain in force.

[Paragraph 14.3.]

(xiii) Decontrol of prices should not have been construed by the manufacturers of soda ash as an occasion for making substantial price changes. A certain amount of self-restraint on the part of producers in a protected industry is called for with regard to their price policy and this is very necessary in the interests of national development.

[Paragraph 15.6.]

Acknowledgements.

17. We wish to express our thanks to the producers, importers and consumers and their Associations who furnished us with valuable information in connection with the inquiry and whose representatives gave evidence before us.

K. R. P. AIYANGAR,

Chairman.

R. BALAKRISHNA,

Member.

M. ZAHEER,

Member.

PRAMOD SINGH,

Secretary.

Bombay, dated 15*th June,* 1964.

APPENDIX I

[*Vide* paragraph 3.1.]

List of firms, bodies, associations and Government Departments to whom the questionnaires/letters were issued and from whom replies or memoranda were received

*Indicates those who have replied.

@Indicates those who replied stating that they are either not dealing with the product or are not interested in the inquiry.

A. PRODUCERS :

*1. Tata Chemicals Ltd., Bombay House, Bruce street, Bombay-1.
*2. Dhrangadhra Chemical Works Ltd., 15A, Horniman Circle, Bombay-1.
*3. Saurashtra Chemicals, Porbandar, (Gujarat State).
*4. Sahu Chemicals & Fertilizers, Prop: New Central Jute Mills Co. Ltd., 11, Clive Row, Calcutta.
*5. K. B. H. M. D. H. Bhiwandiwalla & Co., 583, Chira Bazar, Bombay-2.

B. PRODUCERS' ASSOCIATIONS :

*1. Indian Chemical Manufacturers' Association, India Exchange (8th Floor), India Exchange Place, Calcutta-1.
*2. Alkali Manufacturers' Associaton of India, 15A, Horniman Circle, Fort, Bombay-1.

C. CONSUMERS :

1. Ogale Glass Works Ltd., Ogalewadi, Satara District.
2. Bombay Glass Works Private Ltd., Manmala Tank Road, Bombay-16.
*3. Seraikella Glass Works Ltd., P. O. Kandra (S.E. Rly.), District Singhbhum.
4. Ganga Glass Works Ltd., Balawali, Bijnor District (U.P.).
*5. Vazir Glass Works Ltd., 317, Dadabhai Naoroji Road, Bombay-1.
*6. Calcutta Mineral Supply Co. Pvt. Ltd., 31, Jackson Lane, Calcutta.
*7. Phoenix Chemical Works, Bachoobhai Building, 187, D. N. Road, Bombay-1.
*8. J. K. Chemicals Ltd., J. K. Building, Dougall Road, Ballard Estate, Bombay-1.
9. Mysore Chemical & Soap Works, Sion, Bombay-22.
*10. Shree Ganesh Chemical Industries, 1181, C, Parel Tank Road, Bombay-12.
11. The Silicates (India) Pvt. Ltd., 50, Nesbit Road, Bombay-10.
*12. Kathiawar Chemical Industries, Jorawaranagar, Saurashtra.
13. Rajkot Chemical Industries, Gondal Road, Rajkot-2.
*14. ROM Chemical Works, 3, Kevdawadi, Rajkot-2.
*15. Indian Mineral Industries Ltd., 22/1, Dum Dum Road, Calcutta-2.
16. Satak & Co., (Chemical Department), Beawar.
*17. Pioneer Chemical Co., 158, Tulsi Pipe Road, Matunga, Bombay-16.
18. International Chemical Co., 453, Tulsi Pipe Road, P. B. No. 6479, Matunga, Bombay-16.

*19. Liberty Chemical Works, Nagardas Road, Mogra West, Andheri (East), Bombay-41.

*20. Director General, Ordnance Factories, Government of India, Ministry of Defence, 6, Esplanade East, Calcutta-1.

*21. Hindustan Lever Ltd., Hindustan Lever House, Backbay Reclamation, Bombay-1.

22. Indo-Asahi Glass Co. Ltd., 30, Chittaranjan Avenue, Calcutta-12.

23. Garment Cleaning Works, 37, Dr. A. Besant Road, Worli, Bombay-18.

*24. Star Metal Refinery Pvt. Ltd., 361, Dr. Dadabhoy Naoroji Road, 4th Floor, Fort, Bombay-1.

*25. Golden Chemicals Pvt. Ltd., Vile Parle, Bombay-56.

*26. The Buckingham and Carnatic Co. Ltd., P.B. No. 1966, Madras-1.

27. Cawnpore Chemical Works Ltd., Anwarganj, P.B. No. 27, Kanpur (U.P.).

*28. The Chemical Industries Co. Pvt. Ltd., 29, Strand Road, P.B. No. 2380, Calcutta-1.

*29. Bharat Glass Works, Chembur, Bombay-71.

*30. Orient Paper Mills Ltd., 15, India Exchange Place, Calcutta-1.

*31. Sirpur Paper Mills Ltd., 8, India Exchange Place, Calcutta-1.

*32. The Upper India Copper Paper Mills Co. Ltd., Nishatganj, Lucknow (U.P.).

*33. Sree Durga Glass Works, P. O. Barang, District Cuttack, Orissa.

*34. Punalur Paper Mills Ltd., Punalur, Kerala.

*35. The Bengal Paper Mill Co. Ltd., 14, Netaji Subhas Road, Calcutta-1.

*36. Straw Products Ltd., 2, Mangoe Lane, Calcutta-1.

*37. The Bechardas Spinning & Weaving Mills Co. Ltd., P. O. Box No. 22, Ahmedabad-1.

*38. The Central India Spinning, Weaving & Manufacturing Co. Ltd., Bombay House, Bruce Street, Fort, Bombay-1.

*39. India Paper Pulp Co. Ltd., 8, Clive Row, Post Box No. 150, Calcutta-1.

*40. The Aryodaya Spg. & Wvg. Co. Ltd., Outside Kalupur Gate, Asarva Road, Post Box No. 146, Ahmedabad.

41. Band Box Cleaners, Dr. A. Besant Road, Worli, Bombay-18.

42. Leach & Weborny, 34, Hamam Street, Bombay-1.

43. Comet Cleaners, 81, Wodehouse Road, Bombay-5.

D. CONSUMERS' ASSOCIATIONS :

*1. All-India Glass Manufacturers' Federation, Govind Mansion, Connaught Circus, New Delhi.

2. U. P. Glass Manufacturers Syndicate, Shikohabad.

3. Bengal Glass Manufacturers' Association, P-11, Mission Row Extension, Calcutta-1.

4. South Indian Glass Manufacturers' Associaton, 34, Gandhi Nagar, Bangalore City.

*5. The Glass Bangle Merchants' Chamber, Firozabad (U.P.).

*6. The Glass Industrial Syndicate, Firozabad (U.P.).

7. All-India Bichromate Manufacturers' Association, Currimbhoy House (East), Outram Road, Fort, Bombay-1.

8. Indian Paper Mills' Association, India Exchange, Calcutta-1.

9. Indian Paper Makers' Association, Royal Exchange, Calcutta-1.

10. Indian Soap & Toileteries Markers' Association, P-11, Mission Row Extension, Calcutta-1.

@11. The Vanaspati Manufacturers' Association of India, India House, 5th Floor, Fort Street, Bombay-1.

*12. The Ahmedabad Millowners' Association, P.B. No. 7, Ahmedabad-9.

*13. Millowners' Association, Churchgate Street, P.B. No. 95, Bombay-1.

*14. The Non-Power Soap Manufacturers' Association, Shankersett Bangalow Compound, 380, Girgaon Road, Bombay-2.

E. MERCHANTS' ASSOCIATION :

*The Chemical & Alkali Merchants' Association, Himalaya House, Palton Road, Bombay-1.

F. DISTRIBUTORS OF IMPORTED SODA ASH :

*1. Imperial Chemical Industries (India) Pvt. Ltd., I. C. I. House, 34, Chowringhee, P. O. Box No. 182, Calcutta.

*2. Tata Oil Mills Co. Ltd., Bombay House, 24, Bruce Street, Fort, Bombay-1.

*3. India United Chemical Distributors Ltd., "Wardley House", 25, Swallow Lane, Calcutta-1.

*4. Chemical and Alkali Distributors Ltd., Himalaya House, Palton Road, Bombay-1.

G. RAW MATERIAL SUPPLIER :

*Hindustan Salts Ltd., Badnor House, Bhagwandas Road, P. B. No. 146, Jaipur.

H. (a) GOVERNMENT DEPARTMENTS :

*1. The Directorate General of Technical Development, Udyog Bhavan, Maulana Azad Road, New Delhi.

*2. The Development Commissioner, Small Scale Industries, Udyog Bhavan, Maulana Azad Road, New Delhi.

*3. The Director of Co-ordination and Statistics, The Directorate General of Supplies and Disposals, National Insurance Building, Parliament Street, New Delhi.

*4. The Director, Indian Standards Institution, "Manak Bhavan", 9, Bahadur Shah Zafar Marg, New Delhi.

*5. The Textile Commissioner, Post Box 10004, Bombay-1.

*6. The Secretary, Railway Board, Ministry of Railways, New Delhi.

*7. Western Railway, Churchgate, Bombay-1.

*8. The Managing Director, The State Trading Corporation of India Ltd., Post Box No. 79, Express Buildings 9 & 10, Mathura Road, New Delhi.

*9. The Secretary, Central Board of Revenue for Customs & Central Excises, Ministry of Finance, New Delhi.

*10. The Collector of Customs, New Custom House, Bombay-1.

*11. The Collector of Customs, Custom House, Calcutta.

*12. The Collector of Customs, Custom House, Madras-1.

*13. The Collector of Customs & Central Excise, Custom House, Cochin-3.

*14. The Director of Industries, Government of Gujarat, Ahmedabad.

*15. The Director of Industries (Planning & Research Division), Government of Uttar Pradesh, Kanpur.

*16. The Director of Industries, Government of Maharashtra, Sachivalaya Annexe, Bombay-1.

H. (b) CHIEF SECRETARIES OF STATES :

*1. The Chief Secretary to the Government of Andhra Pradesh, Hyderabad.
2. The Chief Secretary to the Government of Assam, Shillong.
3. The Chief Secretary to the Government of Bihar, Patna.
*4. The Chief Secretary to the Government of West Bengal, Calcutta.
*5. The Chief Secretary to the Government of Gujarat, Ahmedabad.
6. The Chief Secretary to the Government of Jammu & Kashmir, Srinagar.
*7. The Chief Secretary to the Government of Kerala, Trivandrum.
@8. The Chief Secretary to the Government of Madhya Pradesh, Bhopal.
@9. The Chief Secretary to the Government of Madras, Madras.
*10. The Chief Secretary to the Government of Maharashtra, Bombay.
*11. The Chief Secretary to the Government of Mysore, Bangalore.
@12. The Chief Secretary to the Government of Orissa, Bhubaneshwar.
13. The Chief Secretary to the Government of Punjab, Chandigarh.
14. The Chief Secretary to the Government of Rajasthan, Jaipur.
*15. The Chief Secretary to the Government of Uttar Pradesh, Lucknow.
@16. The Chief Commissioner, Delhi Administration, Delhi.
@17. The Chief Commissioner, Himachal Pradesh, Simla.

I. OTHERS :

*Shri M. M. Gurunath, Salt Industrialist, 3, Lakshmana Chettiar Street, Thyagaroyanagar, Madras-17.

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APPENDIX II

[*Vide* Paragraph 3.2]

List of factories visited by the Commission and its Officers

Sl. No.	Name of the unit visited	By whom visited	Date of visit
1.	Tata Chemicals Ltd., Mithapur.	(i) Dr. R. Balakrishna, Member.	23rd March, 1964.
		(ii) Shri U. R. Padmanabhan, Cost Accounts Officer.	25th to 28th March, 1964.
		(iii) Shri M. S. Marballi, Research Officer (Chemicals).	6th & 7th May, 1964.
2.	Saurashtra Chemicals, Porbandar.	(i) Dr. R. Balakrishna, Member.	25th March, 1964.
		(ii) Shri S. K. Basu, Senior Cost Accounts Officer.	17th to 26th February, 1964.
3.	Sahu Chemicals & Fertilizers, Factory at Sahupuri.	(i) Shri S. Saha, Technical Director (Chemicals).	29th January, 1964.
		(ii) Shri A. K. Ganguli, Assistant Cost Accounts Officer.	22nd to 29th January, 1964.
	Head Office at Calcutta.	(i) Shri S. Saha, Technical Director (Chemicals).	3rd February, 1964.
		(ii) Shri A. K. Ganguli, Assistant Cost Accounts Officer.	1st to 4th February, 1964.

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APPENDIX III

[*Vide* Paragraph 3.3]

List of persons who attended the Commission's public inquiry on 21st May, 1964

A. PRODUCERS :

1.	Shri D. S. Seth	Representing	Tata Chemicals Ltd., Bombay House, Bruce Street, Bombay-1.
2.	,, V. K Bali		
3.	,, P. D. Nargolwala		
4.	,, P. Sarma		
5.	,, T. S. Natarajan		
6.	,, H. Ramachandran		
7.	,, N. B. Mehta		
8.	,, C. A. Joshi		
9.	,, P. C. Jain	,,	Dhrangadhra Chemical Works Ltd., 15A, Horniman Circle, Bombay-1.
10.	,, J. G. Jain		
11.	,, S. Rajagopalan		
12.	,, P. V. A. Krishnan		
13.	,, N. C. Jain		
14.	,, S. K. Vakil	,,	Saurashtra Chemicals, Porbandar, Gujarat State.
15.	,, V. N. Maheshwary		
16.	,, D. P. Patkar		
17.	,, G. S. Maheshwari	,,	Sahu Chemicals & Fertilizers, Sahupuri, Varanasi, Uttar Pradesh.
18.	,, S. C. L. Jain		
19.	,, M. B. Kannan		

B. PRODUCERS' ASSOCIATIONS :

20.	Shri V. N. Shah	,,	Indian Chemical Manufacturers' Association, India Exchange (8th Floor), India Exchange Place, Calcutta-1.
21.	,, B. M. L. Moorthy	,,	Alkali Manufacturers' Association of India, 15A, Horniman Circle, Bombay-1.

C. DISTRIBUTORS :

22.	Shri J. S. Nirody	,,	Imperial Chemical Industries (India) Private Ltd., I.C.I. House, 34, Chowringhee, Calcutta-16.
23.	,, C. N. Gosalia	,,	Tata Oil Mills Co. Ltd., Bombay House, Bruce Street, Bombay-1.
24.	,, V. S. Hariharan		

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25.	Shri S. S. Sharma . .	Representing	India United Chemicals Distributors Ltd., Wardley House, 25, Shallow Lane, Calcutta.
26.	,, N. Ramamoorthy .	,,	Chemical & Alkali Distributors Ltd., Himalaya House, Palton Road, Bombay-1.

D. MERCHANTS' ASSOCIATION :

27.	Shri M. B. Patwari . .	,,	Chemical & Alkali Merchants' Association, Himalaya House, Palton Road, Bombay-1.

E. CONSUMERS :

28.	Shri P. K. Kharbanda .	,,	Pioneer Chemicals, 158, Tulsi Pipe Road, Bombay-16.
29.	,, D. V. Kundra . .		
30.	,, M. G. Katwala . .		
31.	,, B. C. Patel . .	,,	Silicate (India) Private Ltd., Opp. St. Mary's High School, 50, Nesbit Road, Mazagaon, Bombay-10.
32.	,, S. K. Oza . .	,,	Golden Chemicals Private Ltd., Vile Parle, Bombay.
33.	,, Amritlal G. Jajal .	,,	Garment Cleaning Works, 37-43, Dr. Annie Besant Road, Worli, Bombay-18.
34.	,, M. E. Menon . .	,,	Shree Durga Glass Works, Barang, Dist. Cuttack, Orissa State.
35.	,, Balakrishna . .	,,	India Chemical Agency, 208, Govindappa Naick Street, Madras.

F. CONSUMERS' ASSOCIATIONS :

36.	Dr. S. R. Lele . .	,,	All India Glass Manufacturers' Federation, Govind Mansion, Connaught Circus, New Delhi.
37.	Shri H. C. Gupta . .		
38.	,, Champaklal D. Shah .	,,	Non-Power Soap Manufacturers' Association, Shankerseth Bangalow Compound, 380, Girgaum Road, Bombay-2.
39.	,, B. B. Samant . .	,,	Millowners' Association, Elphinstone Building, Veer Nariman Road, Bombay-1.
40.	,, R. C. Jain . .		
41.	,, D. K. Athvankar .		

G. GOVERNMENT DEPARTMENTS :

42.	Shri	P. K. Seshan, Development Officer.	Representing	Directorate General of Technical Development, Government of India, New Delhi.
43.	,,	I. C. Dhanda, Joint Divisional Manager, New Delhi.	,,	State Trading Corporation of India Ltd., Express Building, 9 & 10, Mathura Road, New Delhi-1.
44.	,,	K. S. Bhujang, Deputy Director, Chemical Processing Branch.	,,	Textile Commissioner, Bombay.
45.	,,	D. Bir Bakashi, Assistant Coal Controller.	,,	Coal Controller, 1, Council House Street, Calcutta.
46.	,,	T. V. V. Raghavan, Junior Commercial Officer (Rates).	,,	Western Railway, Bombay.
47.	,,	R. Nariman, Assistant Transportation Officer (Goods).		
48.	,,	S. Subrahmanyam, Head ISI Branch Office, Bombay.	,,	Indian Standards Institution, Manak Bhavan, 9, Bahadur Shah Zafar Marg, New Delhi.
49.	,,	Maihman Singh, Assistant Director, Supplies, Bombay.	,,	Directorate General of Supplies and Disposals, Government of India, New Delhi.
50.	,,	R. P. Revankar, Appraiser.	,,	Collector of Customs, Bombay.
51.	,,	S. J. Coelho, Director.	,,	Government of Gujarat, Department of Industries.
52.	,,	P. P. Singla, Deputy Secretary.		
53.	,,	N. M. Soparkar, Deputy Director.		

H. OTHERS :

54.	Shri	M. M. Gurunath, Salt Industrialist, 3, Lakshmana Chettiar Street, Thyagarayanagar, Madras-17.	..	..
55.	,,	R. L. Aggarwal (Observer), B-6/4, Roopnagar, Delhi-6.	..	..

सत्यमेव जयते

APPENDIX IV

[*Vide* Paragraph 9.2]

Statement showing the quantity and value of imports of soda ash during the years 1961, 1962 *and* 1963

Q—Quantity in tonnes
V—Value in lakh rupees

Country of origin	1961							
	Dense soda ash		Light soda ash		Others		Total	
	Q	V	Q	V	Q	V	Q	V
Kenya	29,976	55·94	..	..	11	0·03	29,987	55·97
Japan	7,941	19·00	..	..	..	..	7,941	19·00
Poland	..	..	74	0·12	..	..	74	0·12
U. K.	..	..	33	0·07	17	0·07	50	0·14
Belgium	..	..	2,413	4·20	..	..	2,413	4·20
Bulgaria	..	..	2,667	4·68	..	..	2,667	4·68
Rumania	..	..	6,096	10·88	..	..	6,096	10·88
West Germany	..	..	..	..	..	..	..	..
Rhodesia Nyasaland Federation	..	..	..	..	..	..	..	..
U. S. S. R.	..	..	..	..	..	..	..	..
Small Value Transactions	1	..	..	..	6	0·05	7	0·05
TOTAL	37,918	74·94	11,283	19·95	34	0·15	49,235	95·04

APPENDIX IV—*Contd.*

Statement showing the quantity and value of imports of soda ash during the years 1961, 1962 *and* 1963—contd.

Q—Quantity in tonnes
V—Value in lakh rupees

Country of origin	1962							
	Dense soda ash		Light soda ash		Others		Total	
	Q	V	Q	V	Q	V	Q	V
Kenya	21,779	40·66	27·0	0·05	..	..	21,806·0	40·71
Japan	..	..	..	..	..	..	..	..
Poland	..	..	..	..	..	..	..	..
U. K.	21,292	38·72	2,224·0	4·00	1·2	0·03	23,517·2	42·75
Belgium	..	..	..	..	..	..	..	..
Bulgaria	..	..	..	..	..	..	..	..
Rumania	..	..	..	..	..	..	..	..
West Germany	1	..	0·2	..	0·4	0·01	1·6	0·01
Rhodesia Nyasaland Federation	..	..	..	..	..	..	..	..
U. S. S. R.	..	..	..	..	..	..	..	..
Small Value Transactions	..	..	0·9	..	0·1	..	1·0	..
TOTAL	43,072	79·38	2,252·1	4·05	1·7	0·04	45,325·8	83·47

APPENDIX IV—*Contd.*

Statement showing the quantity and value of imports of soda ash during the years 1961, 1962 *and* 1963—contd.

Q—Quantity in tonnes
V—Value in lakh rupees

Country of origin	1963							
	Dense soda ash		Light soda ash		Others		Total	
	Q	V	Q	V	Q	V	Q	V
Kenya	4,354	8·34	1,113·3	2·20	608·2	1·20	6,075·3	11·74
Japan	..	..	..	..	..	..	..	..
Poland	..	..	..	..	..	..	..	..
U. K.	414	0·76	52·4	0·12	18·8	0·03	485·4	0·91
Belgium	..	..	..	..	..	..	..	..
Bulgaria	..	..	8,000·0	12·80	..	..	8,000·0	12·80
Rumania	..	..	..	..	..	..	..	..
West Gemany	5	0·02	0·1	..	1·0	0·01	6·1	0·03
Rhodesia Nyasaland Federation	..	..	..	..	17·1	0·04	17·1	0·04
U. S. S. R.	..	..	..	..	0·6	0·04	0·6	0·04
Small Value Transactions	..	..	..	..	..	..	..	..
TOTAL	4,773	9·12	9,165·8	15·12	645·7	1·32	14,584·5	25·56

APPENDIX V

[*Vide* Paragraph 12]

Statement showing c. i. f. prices and landed costs of recent imports of soda ash

(Rs. per tonne)

Sl. No.	Source of information	Origin of import	Date of import	C. i. f. price	Customs duty	Clearing charges	Landed cost
		A—*Light Soda Ash*					
1	The Collector of Customs & Central Excise, Cochin	U. K.	April '63	218·33	144·52	11·00	373·85
2	The Collector of Customs, Calcutta	Bulgaria	14-12-63	160·00	144·52	15·54	320·06
3	The State Trading Corporation of India Ltd.	Bulgaria	1963-64	160·00	..	..	..
4	India United Chemical Distributors Ltd., Calcutta	Bulgaria	19-12-63	160·00	144·52	9·15	314·06
5	Chemical & Alkali Distributors Ltd, Bombay	Bulgaria	Dec. '63	160·00	144·52	17·32	321·84
6	Tata Oil Mills Co. Ltd., Bombay	Bulgaria	28-12-63	169·87	144·52	9·29	323·68
7	Imperial Chemical Industries (India) Ltd.	Bulgaria	14-12-63	160·00	144·52	9·29	313·81
		B—*Heavy Soda Ash*					
1	The Collector of Customs, Bombay	Kenya	16-12-63	206·66	144·52	13·50	364·68
2	The State Trading Corporation of India Ltd.	B.E. Africa	1962-63	185·30	..	..	..
		B.E. Africa	1963-64	192·05	..	..	..
		U. K.	1962-63	178·15	..	..	..

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